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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
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09/317,492 05/24/99 WANG

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WEI TE (JOSEPH) CHUNG
FOXCONN INTERNATIONAL INC
1650 MEMOREX DRIVE
SANTA CLARA CA 95050

MM91/0322

EXAMINER

PATEL, T

ART UNIT

PAPER NUMBER

2839

DATE MAILED:

03/22/00

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/317,492

Applicant(s)

Jwo-Min Wang

Examiner

T. C. Patel

Group Art Unit

2839

☐ Responsive to communication(s) filed on _____.

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire three month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-20 is/are pending in the application.

Of the above, claim(s) 1-11 is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 12-20 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☒ The drawing(s) filed on May 24, 1999 is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☒ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☒ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

DETAILED ACTION

General Status

1. This is a **First Action on the Merits**. Claims 1-20 are pending in the case, claims 12-20 are being examined.

Election/Restriction

2. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-11, drawn to method for achieving uniform expansion of a dielectric plate, classified in class 264.
 - II. Claims 12-20, drawn to an electrical connector, classified in class 439, subclass 83.
3. The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the method of making requires a step of providing a mold for injection molding, which is not required for the article claims.

4. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

5. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

6. During a telephone conversation with Mr. Wei Te Chung on March 14, 2000 a provisional election was made without traverse to prosecute the invention of Group II, claims 12-20.

Affirmation of this election must be made by applicant in replying to this Office action. Claims 1-11 withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

7. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(I).

Drawings

8. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, "a connector having a base plate,

Attorney Docket No. None; Inventor(s): Jwo-Min et al.

contacts in the contact receiving bores of the base plate and soldered to the pads on the circuit board" must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

There is no figure which shows the cross section of a bore with a contact terminal and the terminal soldered to a pad on a circuit board.

Claim Rejections - 35 USC § 112

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 12-20 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 12, line 5, it is not clear what is meant by "ball grid array technique" also, for lines 10-15, it is not clear what is meant by "wherein the base plate ... to each other."

For claim 13, it is not clear if the holes refers to the holes in the base plate or holes in the cover.

Claim 14, line 2, it is not clear what is meant by "holes formed in the plate ate alternatively arranged in rows". This is interpreted as "holes formed in adjust rows of the

plate ate alternatively arranged.” Also, it is not clear if “the plate” recited in line 2, is the same as the base plate, recited in claim 1.

Claim 20, line 6, it is not clear what is meant by “holes are designedly arranged to be properly located.”

Only few of the deficiencies are pointed out above, the applicant is required to review all the claims and make necessary corrections.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 12-20, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Bright et al. (US 4,988,310.)

For claims 12 and 20, Bright et al. in figures 2-5, discloses an electrical connector 40, with a base plate 42 having a plurality of contact receiving bores 48, for receiving conductive contacts 46, the contacts being soldered to pads on a circuit board, the base plate also having a plurality of holes 48 (some of the bores are taken as holes), a cover 44, having a plurality of holes 78, the cover being adapted to receive pins 120 of an electronic device. The cover can be

moved, so that the pins can make electrical contact with the contacts in the base plate. The base plate is disclosed to be made of dielectric material.

In so far the recitation of "the base plate is made ... by means of injection molding with a mold comprising core pins whereby the base plate is molded thereby defines a plurality of holes", is concerned, these are the method steps in an article claim and do not carry any patentable weight, and also "plurality of holes in each other", defines the thermal expansion coefficient in the two directions would be almost the same, hence the difference in the thermal expansion coefficient would be minimal.

For claim 14, the holes in the base plate are disclosed to be alternatively arranged. For claim 15, the selection of a specific material is a matter of design choice, and for claim 16, the thermal expansion coefficient would depend on the material selected. For claim 13, "a major diagonal ... material" represent the method step in an article claim and do not carry any patentable weight.

For claim 18, the holes 62 and 48 disclosed in the base plate have different sizes. For claims 13 and 19, the specific selection of shape of the hole would be a matter of design choice, depending on design of contact terminal in the base plate.

13. Claims 12, 14-17 and 20, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Kozel (US 5,637,008.)

For claims 12 and 20, Kozel in figures 2-5, discloses an electrical connector 10, with a base plate 20 having a plurality of contact receiving bores 28, for receiving conductive contacts 34, the contacts being soldered to pads on a circuit board (circuit board not shown), the base plate also having a plurality of holes 28 (some of the bores are taken as holes), a cover 40, having a plurality of holes 42, the cover being adapted to receive pins 62 of an electronic device. The cover can be moved, so that the pins can make electrical contact with the contacts in the base plate. The base plate is disclosed to be made of dielectric material.

In so far the recitation of "the base plate is made ... by means of injection molding with a mold comprising core pins whereby the base plate is molded thereby defines a plurality of holes", is concerned, these are the method steps in an article claim and do not carry any patentable weight, and also "plurality of holes in each other", defines the thermal expansion coefficient in the two directions would be almost the same, hence the difference in the thermal expansion coefficient would be minimal.

For claim 14, the holes in the base plate are disclosed to be alternatively arranged (only alternatively arranged holes are taken). For claim 15, the selection of a specific material is a matter of design choice, and for claim 16, the thermal expansion coefficient would depend on the material selected.

14. The prior art made of record and not relied upon is considered pertinent to applicant's invention. Lee (US 5,562,474), Hsu (US 5,569,045) and Sato et al. (US 5,704,800) are cited for design of socket connectors.

15. Any inquiry concerning this communication should be directed to T. C. Patel (please include both the initials in all the written communications) at telephone number (703) 308-1736. The Group fax number are (703) 308-7722 and (703) 308-7724.



T. C. Patel
Examiner
March 20, 2000
file: 09317492.1